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## ATTRIBUTION GUIDELINES

**Cannistraro, J.C.** (2016). "**Lonely Lean – A Call to Action!**" *Advances in Lean Design & Construction Practice from New England, across the US, and Abroad* full-day event, IGLC-24, July 19, Boston, USA.

An aerial photograph of Boston Harbor and the city skyline. The harbor is filled with numerous sailboats and a few larger ferries. The city skyline features several prominent skyscrapers, including the Prudential Tower. The sky is blue with scattered white clouds.

# Lonely Lean

## A Call to Action!

**John C. Cannistraro, Jr.**  
Tuesday July 19, 2016



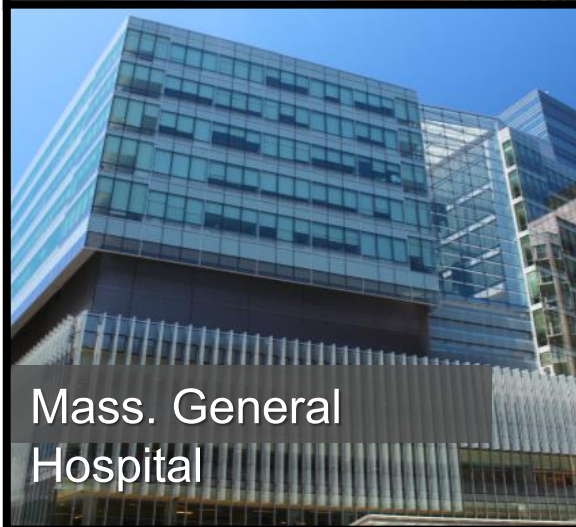
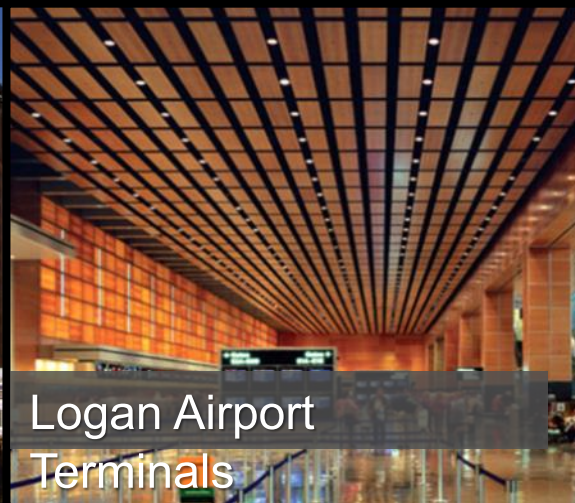
# About Us

- Family-led since 1963
- 800 Employees
- \$205 Million in Annual Revenue

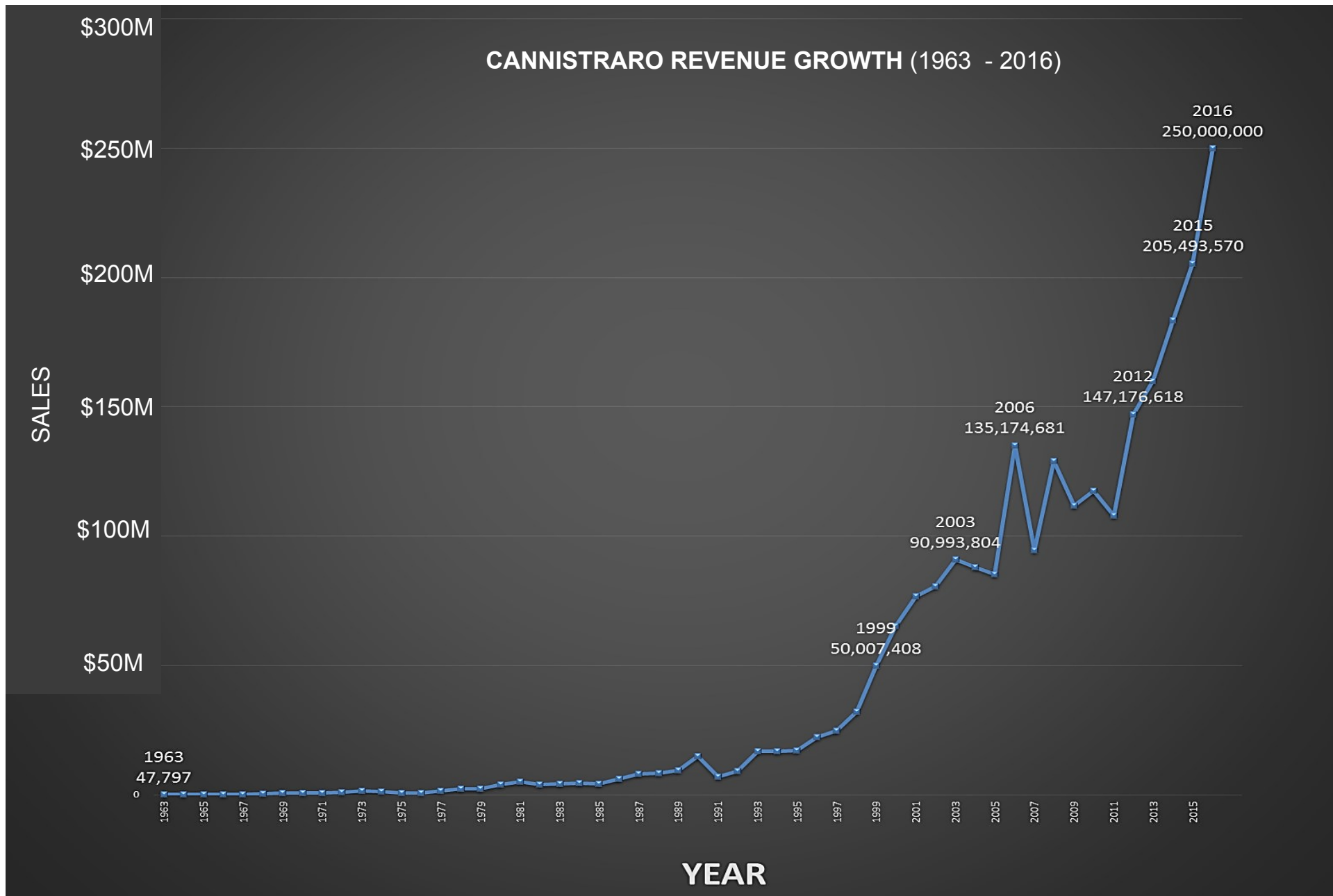




# Our Work







# THE FULL DIMENSION OF BIM

**2D**  
Conventional  
Wisdom

**3D**  
Coordinated  
Modeling

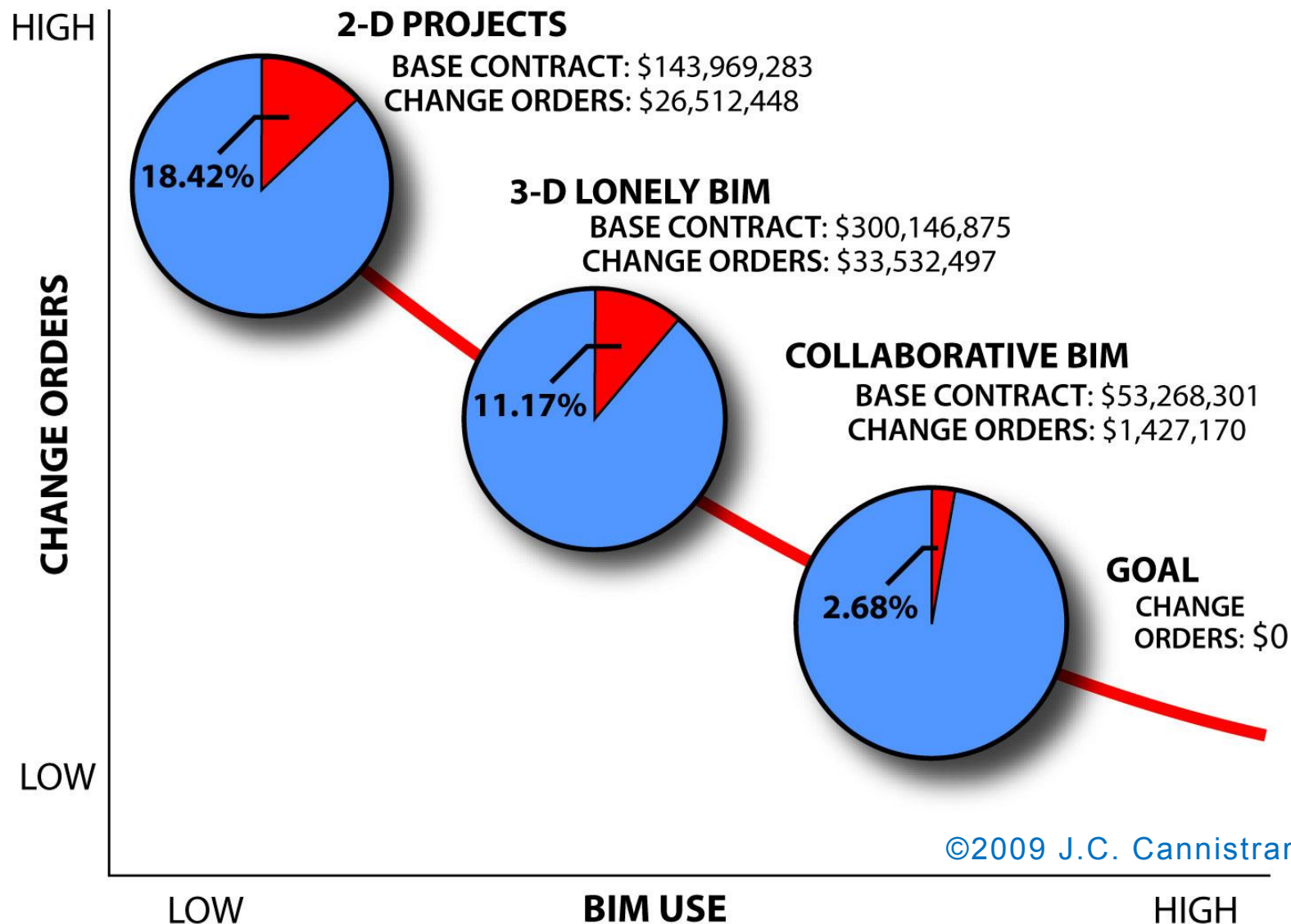
**4D**  
Scheduling

**5D**  
Cost Validation

**6D**  
Facilities  
Management



# How Much Does BIM Save?



**“OK  
guys, it’s  
time to  
load the  
floors...”**





**“Whoa, not all at once!”**

















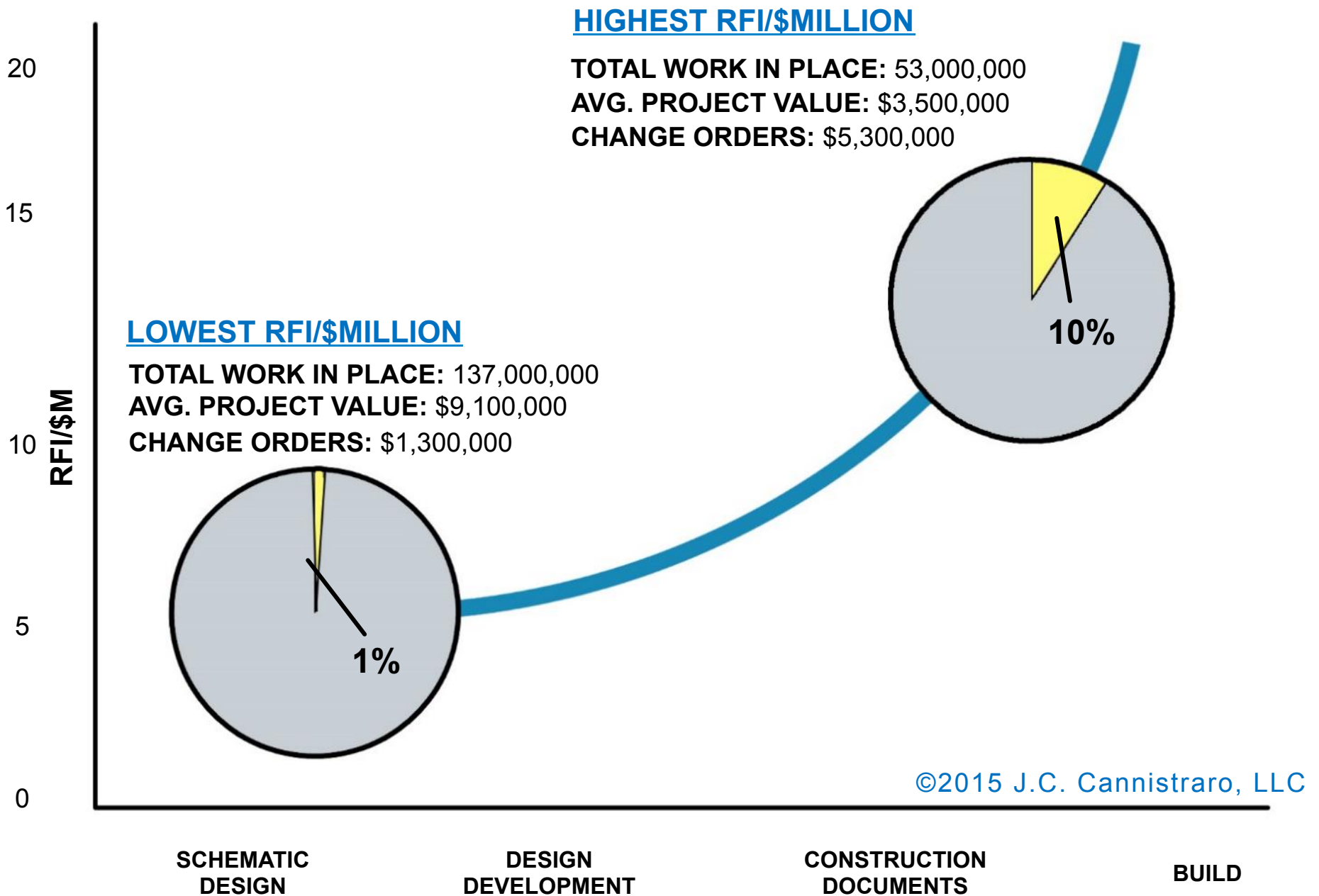


# How much Can Lean Construction Save?

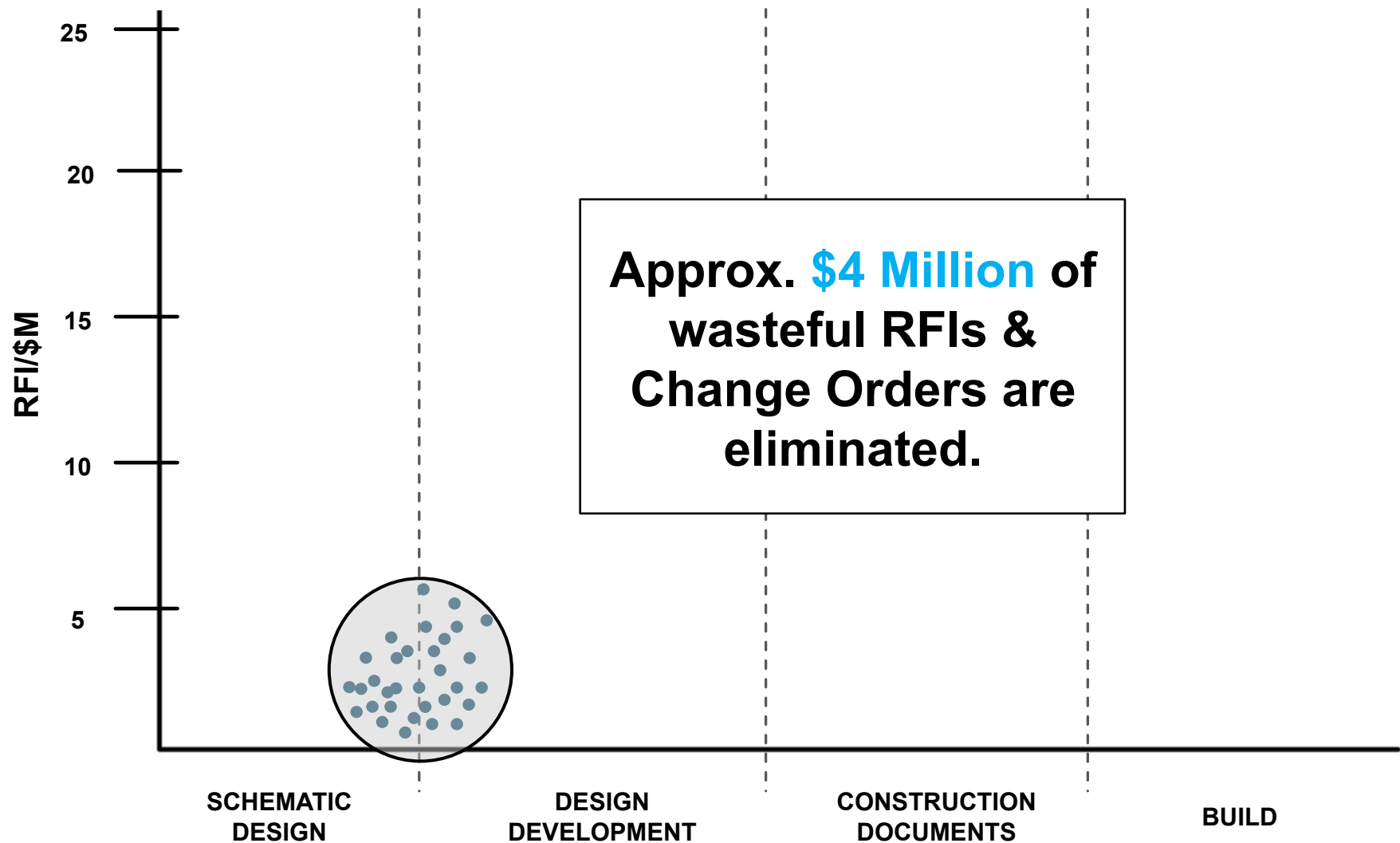
- We researched more than 3 years of project data (2012 – present) totaling:  
**\$380,000,000 & over 2,000**
- We focused on a sample of 50 projects, categorized by Highest & Lowest numbers of **RFI/\$Million & Change**

**Orders**  
Here's what we learned:

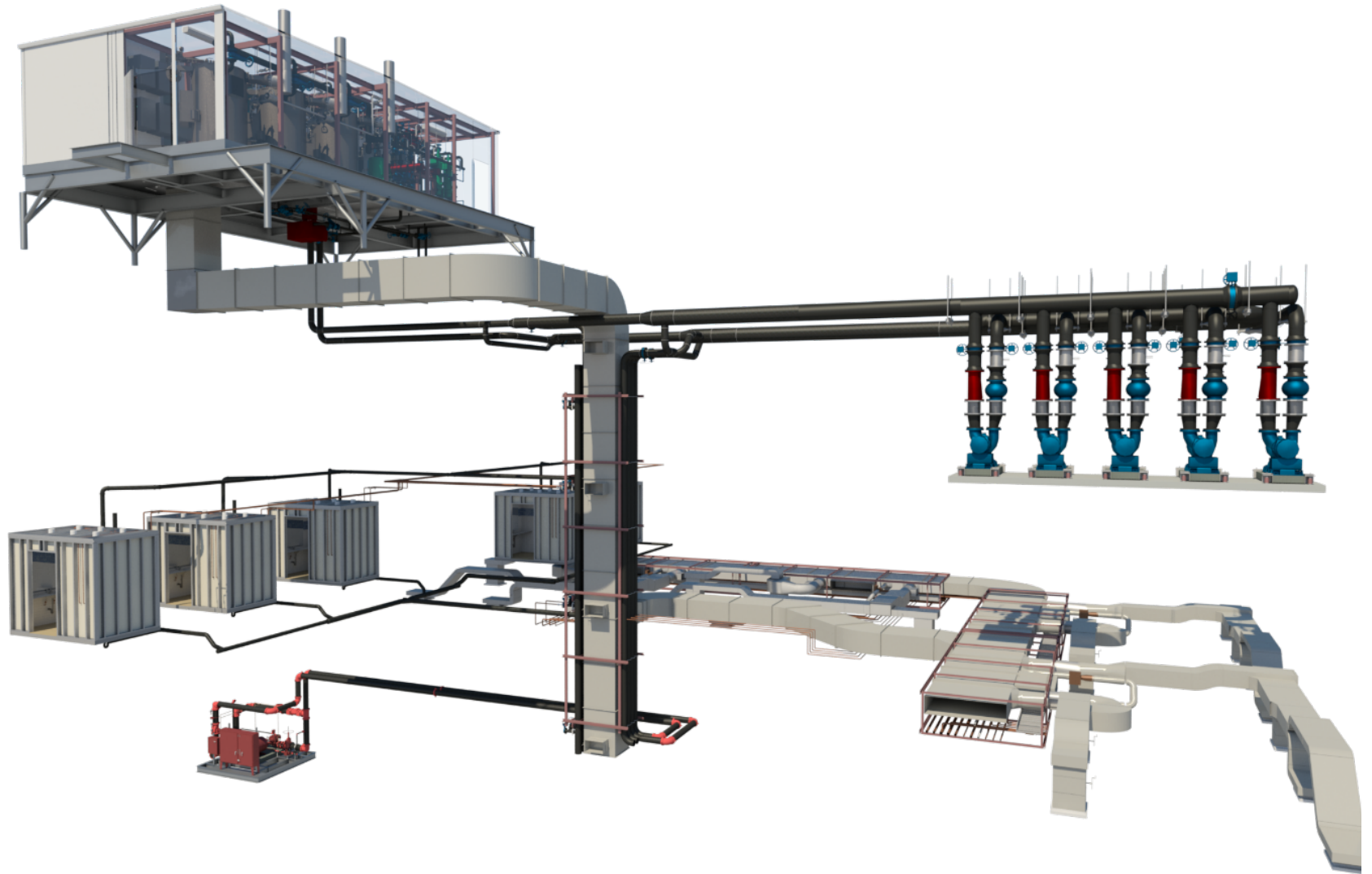




# The Sweet Spot for Lean



















# Steps to Accelerate Lean's Learning Curve:

- 1) Declare that the project will be performed lean, and be willing to change.
- 2) Hire the project team early (~DD Phase) based on capabilities, then the whole team can perform to the budget.
- 3) Ensure that all trades (including structural, drywall & building envelope) are proficient in BIM and are active throughout the coordination process.
- 4) Require the superintendent's presence for purchasing & schedule discussions with all major trades
- 5) Create an environment where all decisions/changes are communicated to all parties in a timely manner
- 6) Engage Principals to reaffirm their company's commitments, and demand best practices for a safe working environment